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| 10/613,199      | 07/03/2003  | Yong C. Kim          | 03/139              | 4571             |

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LEON D. ROSEN  
FREILICH, HORNBAKER & ROSEN  
Suite 1220  
10960 Wilshire Blvd.  
Los Angeles, CA 90024

EXAMINER

FISHMAN, MARINA

ART UNIT PAPER NUMBER

2832

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/613,199

Applicant(s)

KIM ET AL.

Examiner

Marina Fishman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/29/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *General Status*

1. This is a First Action on the Merits. Claims 1 - 9 are pending in the case and are being examined.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 - 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kautz et al. [US 5,950,811] in view of Poling [US 4,920,240] and Atkinson et al. [US 5,001,317].

Kautz et al. disclose a snap action switch, which includes:

- upper and lower nonsnap contacts [18, 25];
- a snap action actuator [22] with an actuation location and tripping leg [Figure 2];
- a middle snap contact [24] on the tripping leg, lying between the upper and lower contacts [Figure 1]; and being moveable between a down position against the lower contact and an up position against the upper contact [Figures 3 - 7];
- the actuator being constructed to snap the middle contact from the down position to the up position, when the actuation

location is depressed beyond a first snap height [Figures 1, 4, 7 Column 2, lines 65 – 68] and to snap the middle contact from the up position to the down position when the actuation location is allowed to rise beyond a second snap height [Figures 3, 5];

- a switch operator [56] with an operator end lying directly over the actuation location [Figures 1,3 –7];
- a spring [60].

Regarding Claim 1, Kautz et al. disclose the instant claimed invention except for means for varying height of one of the nonsnap contacts, to vary one of the snap heights at which the middle contact snaps. Poling discloses a switch having the means [177, 179, Figure 3] for varying height of the nonsnap contact. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the means for varying height of one of the nonsnap contact, in Kautz et al., as suggested by Poling, in order to adjust travel of the switching means [Column 12, lines 24 – 32].

Regarding Claim 2, Kautz et al. disclose frame [12] with a resilient beam [26] mounted on the frame to locate the actuator, however do not show a cantilevered beam and means for adjusting the height of location of the cantilevered beam that is spaced from the first beam end. Poling discloses a switch having a cantilevered beam [171,175] having a first beam end fixed to the frame [Figures 3, 4] with the upper contact being [167] being mounted on the beam and having the means [177, 179] for

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adjusting the height of location of the cantilevered beam that is spaced from the first beam end. It would have been obvious to one having ordinary skill in the art at the time the invention was made to the cantilevered beam with the first beam end fixed to the frame with the upper contact being mounted on the beam and the means for adjusting the height of location of the cantilevered beam that is spaced from the first beam end in Kautz et al., as suggested by Poling, in order to provide engagement between frame and the actuator and adjust travel of the switching means [Column 11 lines 67 –69; column 12, lines 1 - 32].

Regarding Claim 3, Kautz et al. disclose the instant claimed invention except for a nut that is threadably connected to the frame and that has a shoulder that engages the spring second end. Atkinson et al. disclose a nut [29, Figure 1] that is threadably connected to the frame and that has a shoulder that engages the spring second end. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the nut that is threadably connected to the frame and that has a shoulder that engages the spring second end in Kautz et al., as suggested by Atkinson et al., in order to adjust pre-stressing force [Column 5, lines 32 – 35].

Regarding Claims 6 and 7, Kautz et al. disclose the instant claimed invention except for a fluid inlet and a membrane. Poling discloses a fluid inlet and a membrane [Figures 1, 3; Column 5, lines 32 – 45]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a fluid inlet and

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membrane in Kautz et al., as suggested by Poling, in order to operate an electric circuit controlling devices [Column 3, lines 45 – 50].

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sato [US, 6,246,020], Burch [US 4,032,734], Burch et al. [US 3,213, 228], Davis [US 5,149,150], Kaigler [US 5,187,338] all disclose electrical switches. Applicant also should consider these references in response to this office action. Should issue arise concerning the rejection presented above, these references may be relied upon in a subsequent action to support the lack of novelty or obviousness of claimed subject matter to one of ordinary skill in the art.


5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marina Fishman whose telephone number is 571-272-1991. The examiner can normally be reached on 7-5 M-T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marina Fishman  
February 19, 2004



**ELVIN ENAD**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2800**  
2/20/04